

**U.S. Department of the Interior  
Bureau of Land Management**

---

**Environmental Assessment  
DOI-BLM-ID-B010-2013-0021-EA**

**Sharm Nelson  
Mining Plan of Operations**

September 30, 2014

U.S. Department of the Interior  
Bureau of Land Management  
Four Rivers Field Office  
3948 Development Avenue  
Boise, ID 83705



**Environmental Assessment # DOI-BLM-ID-B010-2013-0021-EA  
Sharm Nelson Mining Plan of Operations**

**Table of Contents**

<b>1.0</b>	Introduction.....	1
<b>1.1</b>	Background .....	1
<b>1.2</b>	Need for and Purpose of Action.....	1
<b>1.3</b>	Decision to Be Made .....	1
<b>1.4</b>	Summary of Proposed Action .....	1
<b>1.5</b>	Location and Setting.....	3
<b>1.6</b>	Conformance with Applicable Land Use Plan.....	3
<b>1.7</b>	Relationship to Statutes, Regulations, and Other Requirements.....	3
<b>1.8</b>	Scoping and Development of Issues .....	4
<b>2.0</b>	Description of the Alternatives .....	6
<b>2.1</b>	Alternatives Considered But Not Analyzed in Detail .....	6
<b>2.2</b>	Description of Proposed Action and Alternatives.....	6
2.2.1	Alternative A - No Change/Continue Current Notice.....	6
2.2.2	Alternative B - Proposed Action.....	7
2.2.2.1	Stipulations .....	8
<b>3.0</b>	Affected Environment and Environmental Consequences .....	11
<b>3.1</b>	Soils.....	11
3.1.1	Affected Environment – Soils.....	11
3.1.2	Environmental Consequences – Soils.....	12
3.1.2.1	Alternative A – No Change/Continue Current Mining Notice.....	12
3.1.2.2	Alternative B - Proposed Action .....	12
<b>3.2</b>	Vegetation/Noxious Weeds/Special Status Plants .....	12
3.2.1	Affected Environment – Vegetation/Noxious Weeds/Special Status Plants .....	12
3.2.2	Environmental Consequences – Vegetation/Noxious Weeds/Special Status Plants	
	12	
3.2.2.1	Alternative A - No Change/Continue Current Notice .....	12
3.2.2.2	Alternative B - Proposed Action .....	13
<b>3.3</b>	Wildlife and Migratory Birds/Special Status Animals.....	13
3.3.1	Affected Environment - Wildlife and Migratory Birds/Special Status Species .....	13
3.3.2	Environmental Consequences - Wildlife and Migratory Birds/Special Status	
	Animals 13	
3.3.2.1	Alternative A - No Change/Continue Current Notice .....	13
3.3.2.2	Alternative B - Proposed Action .....	14
<b>3.4</b>	Water Quality/Riparian/Special Status Fish.....	14
3.4.1	Affected Environment - Water Quality/Riparian/Fish.....	14
3.4.2	Environmental Consequences - Water Quality/Riparian/Fisheries .....	15
3.4.2.1	Alternative A - No Change/Continue Current Notice .....	15
3.4.2.2	Alternative B - Proposed Action .....	15
<b>3.5</b>	Air Quality.....	16
3.5.1	Affected Environment - Air Quality .....	16
3.5.2	Environmental Consequences - Air Quality .....	16
3.5.2.1	Alternative A - No Change/Continue Current Notice .....	16
3.5.2.2	Alternative B - Proposed Action .....	16

<b>3.6</b>	Visual Resource Management.....	16
3.6.1	Affected Environment - Visual Resource Management .....	16
3.6.2	Environmental Consequences - Visual Resource Management .....	16
3.6.2.1	Alternative A - No Change/Continue Current Notice .....	16
3.6.2.2	Alternative B - Proposed Action .....	17
<b>3.7</b>	Recreation.....	17
3.7.1	Affected Environment - Recreation .....	17
3.7.2	Environmental Consequences - Recreation .....	17
3.7.2.1	Alternative A - No Change/Continue Current Notice .....	17
3.7.2.2	Alternative B - Proposed Action .....	17
<b>3.8</b>	Cultural Resources .....	17
3.8.1	Affected Environment - Cultural Resources.....	17
3.8.2	Environmental Consequences - Cultural Resources.....	18
3.8.2.1	Alternative A - No Change/Continue Current Notice .....	18
3.8.2.2	Alternative B - Proposed Action .....	18
<b>3.9</b>	Social and Economic.....	18
3.9.1	Affected Environment - Social and Economic .....	18
3.9.2	Environmental Consequences - Social and Economic.....	18
3.9.2.1	Alternative A - No Change/Continue Current Notice .....	18
3.9.2.2	Alternative B - Proposed Action .....	19
<b>3.10</b>	Cumulative Impacts.....	19
3.10.1	Environmental Consequences - Cumulative Impacts .....	19
<b>4.0</b>	Consultation and Coordination .....	19
<b>4.1</b>	Four Rivers Field Office Interdisciplinary Team Members.....	19
<b>4.2</b>	List of Agencies, Organizations, and Individuals Consulted.....	19
<b>4.3</b>	Public Participation .....	19
<b>5.0</b>	References.....	21
<b>6.0</b>	Maps.....	22
<b>7.0</b>	Appendix A - Idaho Conservation League Comments .....	25

# **Environmental Assessment # DOI-BLM-ID-B010-2013-0021-EA**

## **Sharm Nelson Mining Plan of Operations**

### **1.0 Introduction**

#### **1.1 Background**

Placer gold mining began in the Boise Basin as early as 1862. Over the years, the larger rivers in the Boise Basin were mined with gold dredges, while the smaller streams and tributaries were hydraulically mined by running large amounts of water into ditches, and then flooding the surface, thus washing the unconsolidated material into an area where it could be run through a sluice box. While these operations recovered a substantial amount of gold, they were not completely efficient; therefore, some gold remains in the area. High gold prices and improved recovery techniques have made these areas desirable for mining. The entire area included in Mr. Nelson's Mining Plan of Operations has previously been disturbed by placer mining operations. Mr. Nelson's placer mining operations are considered extremely small scale when compared to the early dredge and hydraulic operations in the area.

#### **1.2 Need for and Purpose of Action**

On January 28, 2011, Sharm Nelson submitted a Notice under 43 Code of Federal Regulations (CFR) 3809 to conduct small scale placer mining operations on BLM land in the Boise Basin near the historic town site of Pioneerville, Idaho. Mr. Nelson has amended his Mining Notice twice in the last few years to accurately reflect what his mining operations would involve for each upcoming mining season. On January 4, 2012, Mr. Nelson discussed with Valerie Lenhartzen, geologist, what submittals BLM would require for a Mining Plan of Operations (MPO), as he anticipated that he would eventually exceed the 1000-ton bulk sample volume limit and/or the 5-acre disturbance limit on his existing Mining Notice. On April 18, 2012, Mr. Nelson submitted a MPO. After a number of requests for, and receipt of, additional information, Mr. Nelson's MPO was determined to be complete on February 19, 2014.

The 43 CFR 3809 Regulations (3809.411(a) (3) (ii)), state that an environmental review, required under the National Environmental Policy Act (NEPA), is to be completed prior to approving mining operations proposed under a MPO.

#### **1.3 Decision to Be Made**

The decision to be made is to determine whether or not to authorize Mr. Nelson's MPO and to require mining in such a manner to prevent/minimize degradation and disturbance to public land.

#### **1.4 Summary of Proposed Action**

Mr. Nelson's MPO proposes gold placer operations ~ 0.75 miles north of Pioneerville, Idaho and adjacent to the Grimes Creek Road on his To Close and To Close 2 mining claims (40 acres) on BLM surface/BLM sub-surface land. Operations would occur from April to mid-November each year, as weather permits. Operating hours would be daylight hours, and could occur on any days in the week, Monday through Sunday.

The proposed operation would use up to two dual axle dump trucks, a wash plant with a 30-yard-per-hour-capacity trommel, up to two backhoe loaders and/or loader, a bull dozer if

needed, up to a 500- series track hoe, and a water hose of up to three-inch capacity to draw water from nearby Grimes Creek. The operations would take place on Mr. Nelson's two mining claims: To Close and To Close #2.

Mr. Nelson proposes digging trenches up to approximately 40 feet wide (E-W) by up to 150-feet long (N-S) from approximately one to 15-foot depths beginning on the flat and proceeding up slope to the east. Overburden would be placed to the east side of trenching (upslope) to allow for a simple push back into the trenches for reclamation and re-contouring. Material removed from trenches would be processed through the wash plant. Over-sized material would be used to fill in trenches. Fines and water from the wash plant would be directed into a settling pond and the water would either be re-circulated or allowed to percolate into the ground and ultimately be returned to Grimes Creek. The settling pond would occasionally be excavated, and fines and other washed material would also be used to fill in excavated trenches.

Mr. Nelson would be required to obtain a temporary water right permit from the Idaho Department of Water Resources annually for the water that he pumps from Grimes Creek and submit a copy of the permit to the BLM annually.

Site reclamation, including filling in of trenches and contouring, would be done in intervals throughout the year. No more than two trenches would be open at one time. Re-seeding and planting with BLM-approved seed and plant mix would occur each fall in areas that have been in-filled and re-contoured.

Mining operations may require removal of some trees, however, Mr. Nelson would be required to first notify the Authorized Officer before removing any trees with a 12-inch or greater diameter at breast height so they could be surveyed for nesting birds such as northern goshawks, flammulated owl, and white-headed woodpecker.

No chemicals, including mercury or cyanide, would be used in processing to recover minerals.

Mr. Nelson may have a power pole installed on his "To Close" claim to provide a direct power source to his wash plant, rather than using a gas-powered generator as he has done while conducting operations on his mining Notice. The line would be extended from an existing power pole and line adjacent to the claim on the east side of Grimes Creek Road. Although Mr. Nelson is undecided if he would have the power pole and line installed because of the costs he would incur, it is our intention to analyze the installation as a part of his proposed MPO.

Mr. Nelson also proposes to continue to maintain a 12' x14' sheepherder's tent and a self-contained cargo trailer for shelter and as a temporary mine office for storage of tools and supplies. His occupation of the site during mining operations would prevent vandalism or theft of his equipment. The tent and trailer would be removed at the end of each mining season (April through mid-November, depending on weather, yearly). Mr. Nelson would provide approved sanitary facilities at his camp site, and maintain a clean and orderly camp.

## **1.5 Location and Setting**

The Boise Basin (Basin) is located 30-40 miles northeast of Boise, Idaho and is accessed by State Highway 21. It consists of private and State lands surrounded by Boise National Forest. Idaho City, the county seat of Boise County, is located 38 miles from Boise on Highway 21. Pioneerville lies in the north portion of the Basin, 9.6 miles north of Idaho City along Grimes Creek (Map 1). The BLM manages the surface and sub-surface of those sections in the Basin where the towns of Centerville, Placerville, Pioneerville, and Quartzburg were originally located.

Mr. Nelson's Notice-level placer operations are being conducted on BLM surface/subsurface in Township 7 North, Range 5 East, Section 3, Lot 14 and SENE. Mr. Nelson has been conducting placer mining under his Mining Notice (IDI-36954) on his "To Close" mining claim (IMC-2020893) since 2011 and on his "To Close #2" mining claim (IMC-205745) since April 2013. Mr. Nelson proposes operations under a MPO on both claims. Since the claims are adjacent to each other, they would be analyzed as a 40-acre claim block (Map 2)

## **1.6 Conformance with Applicable Land Use Plan**

The proposed action conforms to the July 1988 Cascade Resource Management Plan (RMP) (USDI 1988). The Boise Basin is classified for intensive management of minerals. Areas of intensive management will emphasize "providing for mineral production while protecting important wildlife values, restoring water quality, and rehabilitating site productivity and stream stabilization through reclamation" (ROD, p. 20).

The Cascade RMP further recommended that nine sites, including Pioneerville, be nominated to the National Register of Historic Places (NRHP). Baseline monitoring of three of these sites, Centerville, Placerville, and Pioneerville started in 1993 (Cascade Resource Area RMP Update, July, 1994). As of this date, Pioneerville has not been nominated because past disturbances have compromised the archeological significance of the site.

## **1.7 Relationship to Statutes, Regulations, and Other Requirements**

The 1872 Mining Law [30 United States Code (U.S.C.) 22 *et seq.*] states that a person has a statutory right consistent with other laws and Departmental regulations to go upon the open (unappropriated and unreserved) public land for the purpose of mineral prospecting, exploration, development, and extraction.

The Federal Land Policy and Management Act (FLPMA) of 1976 (Public Law 94-579) require that the Secretary of the Interior regulate mining operations to prevent undue or unnecessary degradation of the public lands.

Executive Order 13186 expressly requires that Federal agencies evaluate the effects of proposed actions on migratory birds (including eagles) pursuant to NEPA "or other established environmental review process;" restore and enhance the habitat of migratory birds, as practicable; identify where unintentional take reasonably attributable to agency actions is having, or is likely to have, a measurable negative effect on migratory bird populations; and, with respect to those actions so identified, the agency shall develop and use principles,

standards, and practices that will lessen the amount of unintentional take, developing any such conservation efforts in cooperation with the Service.

### Cultural Resource Laws and Executive Orders

BLM is required to consult with Native American tribes to “help assure (1) that federally recognized tribal governments and Native American individuals, whose traditional uses of public land might be affected by a proposed action, will have sufficient opportunity to contribute to the decision, and (2) that the decision maker will give tribal concerns proper consideration” (U.S. Department of the Interior, BLM Manual Handbook H-8120-1). Tribal coordination and consultation responsibilities are implemented under laws and executive orders that are specific to cultural resources which are referred to as “cultural resource authorities,” and under regulations that are not specific which are termed “general authorities.” Cultural resource authorities include: the National Historic Preservation Act of 1966, as amended (NHPA); the Archaeological Resources Protection Act of 1979 (ARPA); and the Native American Graves Protection and Repatriation Act of 1990, as amended (NAGPRA). General authorities include: the American Indian Religious Freedom Act of 1979 (AIRFA); the National Environmental Policy Act of 1969 (NEPA); the Federal Land Policy and Management Act of 1976 (FLPMA); and Executive Order 13007-Indian Sacred Sites. The proposed action is in compliance with the aforementioned authorities.

Southwest Idaho is the homeland of two culturally and linguistically related tribes: the Northern Shoshone and the Northern Paiute. In the latter half of the 19th century, a reservation was established at Duck Valley on the Nevada/Idaho border west of the Bruneau River. The Shoshone-Paiute Tribes residing on the Duck Valley Reservation today actively practice their culture and retain aboriginal rights and/or interests in this area. The Shoshone-Paiute Tribes assert aboriginal rights to their traditional homelands as their treaties with the United States, the Boise Valley Treaty of 1864 and the Bruneau Valley Treaty of 1866, which would have extinguished aboriginal title to the lands now federally administered, were never ratified.

Other tribes that have ties to southwest Idaho include the Bannock Tribe and the Nez Perce Tribe. Southeast Idaho is the homeland of the Northern Shoshone Tribe and the Bannock Tribe. In 1867 a reservation was established at Fort Hall in southeastern Idaho. The Fort Bridger Treaty of 1868 applies to BLM’s relationship with the Shoshone-Bannock Tribes. The northern part of the BLM’s Boise District was also inhabited by the Nez Perce Tribe. The Nez Perce signed treaties in 1855, 1863 and 1868. BLM considers off-reservation treaty-reserved fishing, hunting, gathering, and similar rights of access and resource use on the public lands it administers for all tribes that may be affected by a proposed action.

## **1.8 Scoping and Development of Issues**

A meeting was held on February, 18, 2014 with Four Rivers Field Office staff to identify relevant issues to the Nelson MPO. The following preliminary issues were discussed:

- **Riparian Areas, Water Quality, Fish** – Grimes Creek is an Idaho Department of Environmental Quality (IDEQ) water quality impaired stream (303(d) listed) (US Environmental Protection Agency [US EPA], 2010). Redband trout, a BLM Type 2

species, are present in Grimes Creek (Idaho Department of Fish and Game [IDFG], 2005). The area is not critical habitat for listed Threatened and Endangered (T&E) fish species, including bull trout (*Salvelinus confluentus*).

- **Lands with Wilderness Characteristics**– No lands with wilderness characteristics were identified in a recent inventory conducted in preparing the Four Rivers Resource Management Plan Draft Environmental Impact Statement.
- **Vegetation/Noxious Weeds/Special Status Plants** – There could be a potential for noxious weeds invading disturbed areas if sites are not reseeded. (Section 3.2.1)
- **Public Health & Safety** – There could be a potential safety hazard if high walls and or deep trenches are created during mining and left open for long periods of time. In order to provide for public safety, in the event Mr. Nelson opens areas larger than the initial trenched area, berms, signs or warning tape would be installed that warn off-highway vehicle (OHV) users of an area being mined. This issue has been resolved.
- **Livestock Management** – The lands are not grazed by domestic livestock. This issue is resolved.
- **Wildlife and Migratory Birds** – There is potential for impacting raptors (northern goshawks, flammulated owl, and white-headed woodpecker) if nesting trees are removed. (Section 3.3.2)
- **Recreation** – OHV use may be impacted by opening trenches or pits adjacent to existing area roads and trails (see Public Health & Safety above).
- **Air Quality** – There is the potential for fugitive dust as Mr. Nelson excavates materials to be processed. (Section 3.5.2)
- **Visual Resource Management (VRM)** – Mining activities might not be in conformance with the VRM classification for the area. (Section 3.6.2)

The public was notified in 2013 when the BLM listed the project on the ePlanning NEPA Register webpage ([https://www.blm.gov/epl-front-office/eplanning/nepa/nepa\\_register.do](https://www.blm.gov/epl-front-office/eplanning/nepa/nepa_register.do)). No comments were received from this posting.

On March 19, 2014 at the Boise District Office, a meeting was held with Mr. John Robison of the Idaho Conservation League (ICL). This proposal was discussed and ICL was given a brief summary of the proposed action and accompanying maps. ICL has concerns regarding access, noxious weeds, water quality protection, trench location and design, hazardous materials, fires and emergency egress, trench water, water source, living situation, excavation operations, length of operations, storm water permits, historic aspects, transportation plan and site access, cumulative impacts, reclamation, and financial assurances. Most of ICL's concerns for impacts are either mitigated or greatly reduced based on design features of the proposed action or in standard or special stipulations. ICL's specific list of concerns and BLM's response is listed in Appendix A.

The proposed project was presented to the Shoshone-Paiute Tribes at a March 20, 2014, Boise District Wings and Roots Native American Campfire consultation. The tribe had concerns regarding inadvertent discoveries of cultural/historical artifacts during operations. These potential impacts are addressed in Standard Stipulations 2 and 3 (Section 2.2.2.1).

## **2.0 Description of the Alternatives**

### **2.1 Alternatives Considered But Not Analyzed in Detail**

The very nature of 43 CFR 3809 regulations limits the MPO alternatives submitted by the mining claimant. Alternatives that propose moving the claimant's operations to another area are not reasonable because the material to be mined and the mining claims are tied to a specific tract where the placer gold occurs. Alternative mining methods are unreasonable because the mined material only has to be washed to recover the contained placer gold. No chemicals are used in the process. As such, the mining regulations require that BLM review the submitted MPO to identify and mitigate impacts to insure that unnecessary or undue degradation to public lands does not occur.

### **2.2 Description of Proposed Action and Alternatives**

#### **2.2.1 Alternative A - No Change/Continue Current Notice**

Allow Mr. Nelson to continue to operate under his existing Mining Notice until the notice-level thresholds of five-acre disturbance, or removal of 1000 tons bulk sample are met, then close the mining Notice for Mr. Nelson's two mining claims, and require all areas of disturbance be reclaimed.

Under the existing mining notice, Mr. Nelson would utilize a rubber-tired backhoe to dig trenches in areas that may have been missed by previous placer operations (Photo 1). Material from the open trench would then be sampled initially with a gold pan or a high banker. If gold is found, he would load the material into his dump truck and transfer it to his wash plant for processing to recover the gold. His wash plant consists of a hopper with spray bars, a 30 ton/hour capacity trommel, and an attached sluice box (Photo 2). The water for the wash plant would be pumped from Grimes Creek with a six horsepower gasoline fueled water pump (2-inch). The water is transported from the pump through a two-inch hose that travels under Grimes Creek Road and across the claim block to the wash plant. The excavated material would then be processed through the wash plant to recover any placer gold. This process would be repeated until gold is no longer recovered from the material. Following processing, Mr. Nelson would put the material back into the trench, return the area to pre-disturbance contour, seed the disturbed area in the fall, and move on to another location. Exploratory trenching and mining would disturb approximately 1-acre per year (equivalent of forty-eight 30-foot by 30-foot excavations) within the 40-acre claim block.



Photo 1 - Exploration excavation for placer gold.



Photo 2 - Dump truck, loader, backhoe and wash plant used by Mr. Nelson for his mining Notice

### 2.2.2 Alternative B - Proposed Action

Mr. Nelson's MPO proposes gold placer operations ~ 0.75 miles north of Pioneerville, Idaho and adjacent to the Grimes Creek Road. The proposed operation would use up to two dual axle dump trucks, a wash plant with a 30-yard-per-hour-capacity trommel, up to two backhoe loaders and/or loader, a bull dozer if needed, up to a 500-series track hoe, and a pump and water hose of up to three-inch capacity to draw water from nearby Grimes Creek. The operations would take place on Mr. Nelson's two mining claims: To Close and To Close #2. Approximately one to two acres of ground will be disturbed per year (equivalent of seven to fourteen 40-foot by 150-foot excavations) on Mr. Nelson's two twenty-acre mining claims.

Mr. Nelson's proposed action under the MPO entails mining in much the same manner as when he operates under his Mining Notice, but on a little larger scale. He proposes digging trenches up to approximately 40 feet wide (E-W) by up to 150-foot long (N-S) from approximately one to 15-foot depths, beginning on the flat and proceeding up slope to the east. Overburden would be placed to the east side of trenching (upslope) to allow for a simple push back into the trenches for reclamation and re-contouring. Material removed from trenches would be processed through

the wash plant. Over-sized material would be used to fill in trenches. Fines and water from the wash plant would be directed into a settling pond and the water would either be re-circulated or allowed to percolate into the ground and ultimately be returned to Grimes Creek via groundwater flows. The settling pond would occasionally be excavated so fine sediment could also be used to fill in trenches.

Mr. Nelson would be required to obtain a temporary water right permit from the Idaho Department of Water Resources annually for the water that he pumps from Grimes Creek and submit a copy of the permit to the BLM annually.

Operations would take place from April to mid-November each year as weather permits. Reclamation (filling in of trenches), and contouring would be done in intervals throughout the year to keep no more than two trenches open at one time. Re-seeding and planting with BLM-approved seed and plant mix would occur each fall in areas that have been in-filled and contoured.

Mining operations may require removal of some trees, however, Mr. Nelson would be required to first notify the Authorized Officer before removing any trees with a 12" or greater diameter at breast height so they could be surveyed for nesting birds such as northern goshawks, flammulated owl, and white-headed woodpecker.

Mr. Nelson may have a power pole installed on his To Close claim to provide a direct power source to his wash plant rather than using a gas-powered generator as he has done while conducting operations on his mining Notice. The line would be extended from an existing power pole and line adjacent to the claim and on the east side of Grimes Creek Road. Although Mr. Nelson is yet unsure if he would have the power pole and line installed, depending on the costs he would incur, it is our intention to analyze the installation as a part of his proposed Plan.

Mr. Nelson also proposes to continue to maintain a 12' x14' sheepherder's tent and a self-contained cargo trailer for shelter and as a temporary mine office for storage of tools and supplies. His occupation of the site during mining operations would prevent vandalism or theft of his equipment. The tent and trailer would be removed at the end of each mining season (Mid-April through October 31, yearly). Sanitary conditions, and a clean orderly camp, would be maintained at all times.

### **2.2.2.1 Stipulations**

#### **Standard Stipulations**

1. All plans of operations would be conducted in accordance with 43 CFR Subpart 3809 - Surface Management and 43 CFR Subpart 3715 - Use and Occupancy under the Mining Laws.
2. When American antiquities or other objects of historic or scientific interest including, but not limited to; historic or prehistoric ruins, vertebrate fossils or artifacts are discovered in the performance of this contract, the items(s) or condition(s) would be left intact and

immediately brought to the attention of the district manager or his authorized representative.

3. The claimant/operator would immediately notify the BLM's Authorized Officer of any human remains unearthed during mining operations (25 USC 3002 Section 3 (d) *'inadvertent discovery of Native American remains and objects'*).
4. Claimant/operator would maintain the area free of trash and refuse during operations and reclamation.
5. Claimant/operator would be responsible for suppression costs of any fires resulting from actions under this MPO.
6. The approved mining and reclamation plan and environmental assessment would be part of this MPO as special conditions governing all operations under the MPO.
7. Any deviations from the approved MPO, reclamation plan, and these stipulations would be subject to approval by the BLM authorized officer prior to such actions.
8. If claimant/operator stops conducting operations, other than seasonally as dictated by weather, then subchapter 3809.424 of 43 CFR must be followed. Requirements may include the removal of all equipment, personal property, and other improvements from the area and reclamation of the area according to the approved reclamation plan.
9. The claimant/operator would not mine in the area covered by this MPO without a financial guarantee (43 CFR §3809.582) that has been approved by BLM's Authorized Officer.
10. Claimant/operator would indemnify and save harmless the United States of America against any liability for damages to life, person, or property arising from the use of the lands under this MPO.
11. Claimant/operator would notify the BLM's Authorized Officer before any standing trees greater than 12" diameter breast height (dbh) are removed by mining operations. Fallen trees >12" dbh would be retained on site for reclamation purposes.
12. Storage of recreational equipment (i.e., boats, mobile homes, camping trailers, etc.) would not be authorized under this MPO except for use as shelter and to house mining supplies/equipment only during periods of active mining.
13. Storage of construction equipment (i.e., crushers, dump trucks, graders, dozers, etc.) other than the equipment mentioned in the plan of operation would not be authorized under this MPO.
14. No construction waste material, other materials or debris may be hauled onto the site, stockpiled or used as fill material.

15. The BLM Authorized Officer may cancel the MPO if the claimant/operator fails to observe its terms and conditions (to include these stipulations), or if the plan of operation has been issued erroneously (43 CFR §3809.602).
16. The subject site and haul roads would be sprayed as necessary with water or other suitable material to hold down the dust created by these activities.
17. Proper mufflers and spark arresters would be maintained on equipment used in this project to reduce noise level and to limit the potential for fires. In addition, the claimant/operator and any contractors or subcontractors would maintain and have on the site adequate fire prevention and extinguishing equipment. The claimant/applicant must report any on-site fires to the BLM Authorized Officer as soon as practicable.
18. Claimant/operator would remove only as much overburden and vegetation as is needed for each operation so as to keep visual, wildlife, and land stability impacts to a minimum.
19. Whenever possible, reclamation would proceed concurrently with excavation.
20. For interim and final reclamation, the claimant/operator would slope excavation walls to a minimum of 3:1 ratio; overburden would be replaced, and all disturbed areas would be seeded with a BLM approved seed mix.
21. This MPO does not grant the claimant/operator exclusive use of the public lands identified herein.
22. All claimant/operators are required to provide employee training sufficient to meet the requirements of Title 30, CFR, Part 46 and 62, regarding operator safety training and noise exposure standards. Claimant/operators are also responsible for insuring that any subcontractors have met all of the above requirements. Additional information may be obtained from the internet at [www.msha.gov/](http://www.msha.gov/).
23. Noxious weed control would be the responsibility of the claimant/operator. Best management practices would be followed. These include, but are not limited to:
  - a. Ensure vehicles and equipment are free of soil and plant material before entering site.
  - b. Monitoring of disturbed areas for noxious weeds for 3 years after work completion.
  - c. Prompt treatment action after identification of noxious weed infestation, including proper application of BLM approved herbicides, or physical removal and disposal.
  - d. At the completion of mining operations or during interim reclamation, replanting with a BLM approved seed mix to help prevent noxious weed infestation.
  - e. Monitoring the site after interim or final reclamation to ensure that a desirable plant population has been established.

### **Special Stipulations**

1. Mr. Nelson would monitor disturbed and reclaimed areas and notify the BLM's Authorized Officer of the presence of any noxious weeds.

2. Mr. Nelson would be required annually to apply for a temporary water right from the Idaho Department of Water Resources and annually provide a copy of the granting document to the BLM.
3. An impermeable, geotextile-lined berm, capable of containing four times the pump fuel tank capacity would be placed around and under pumps used in processing to prevent accidental fuel or oil spills from polluting ground or surface waters. The liner would be at least 20 millimeters thick. Spill kits and contingency plans would be required for any hazardous materials used on site.
4. If mined areas are to remain open for longer than one mining season, the open areas would be bermed or signs placed to indicate their presence.
5. Mr. Nelson would be required to provide the BLM with an updated map of his occupancy and processing facility locations on the mining claims if they change from the locations identified in this MPO.
6. Mr. Nelson would be required to ensure that suction hose used to draw water out of Grimes Creek is equipped with a screen to pre-filter the water, and prevent entrainment of fry and juvenile redband trout.
7. Mr. Nelson would be required to ensure that his pvc claim corner markers are securely capped to prevent the entrapment and endangerment of birds and other small wildlife species in the area.
8. Prior to installation of a new power pole, BLM would be notified and coordination between the power company would take place to ensure protection to migratory birds and safe-guard habitat from wildfire risk.
9. Hazardous waste would be disposed of off-site at an approved facility.

### **3.0 Affected Environment and Environmental Consequences**

#### **3.1 Soils**

##### **3.1.1 Affected Environment – Soils**

The claim block area ranges from flat on the west near the Grimes Creek Road from dredge tailings to steep slopes with incised drainages to the east. The entire area is underlain by thin, highly erosive granitic soils that lie on granitic bedrock. Hydraulic mining of the area in the 1890s removed all developed soil, leaving a loose assemblage of unsorted cobbles, sand, and silt. The placer mining has led to rill and gully erosion, prevalent on the steeper slopes to the east of Mr. Nelson's operations. Although a new vegetative community has established in the area, it is still susceptible to heavy erosion during heavy spring runoff or high intensity rainfall events.

### **3.1.2 Environmental Consequences – Soils**

#### **3.1.2.1 Alternative A – No Change/Continue Current Mining Notice**

Conditions would remain much the same as the present situation. Any soil profile, primarily surface and subsurface organic material that has developed since historic mining activities, would be removed in excavated areas. Approximately one acre of disturbance (equivalent of forty-eight 30-foot by 30-foot excavations) in any year would be susceptible to minor amounts of wind and water erosion. Soil movement from disturbed areas would generally be captured in adjacent vegetated areas. Contouring and reclamation efforts would minimize or eliminate erosion from disturbed areas once seeded species become established, generally after two to three growing seasons.

#### **3.1.2.2 Alternative B - Proposed Action**

Similar to Alternative A, any soil profile, primarily surface and subsurface organic material that has developed since historic mining activities, would be removed in excavated areas. Approximately one to two acres of disturbed areas (around seven to fourteen 40-foot by 150-foot excavations) in any year would be susceptible to minor amounts of wind and water erosion. Soil movement from disturbed areas would generally be expected to be captured in adjacent vegetated areas. Contouring and reclamation efforts would minimize or eliminate erosion from disturbed areas after seeded species become established, generally two to three growing seasons.

### **3.2 Vegetation/Noxious Weeds/Special Status Plants**

#### **3.2.1 Affected Environment – Vegetation/Noxious Weeds/Special Status Plants**

The mining claim is located in a ponderosa pine/Douglas-fir forest with small patches of montane shrubs, grasses and forbs. Boulders and cobble visible in some areas indicate that mining probably did occur in this location previously. From aerial and eye-level photographs, the vegetation appears to be recovering from previous mining, in contrast to the highly disturbed private land to the east and the public land to the west. The section of public land containing the mining claims has several known noxious weed species, including Canada thistle, oxeye daisy, rush skeletonweed, spotted knapweed, and yellow toadflax.

No threatened and endangered or BLM sensitive species or their habitat, including the federally “proposed endangered” slickspot peppergrass, are known to occur within the confines of the project area.

#### **3.2.2 Environmental Consequences – Vegetation/Noxious Weeds/Special Status Plants**

##### **3.2.2.1 Alternative A - No Change/Continue Current Notice**

Up to one acre of vegetation would be removed annually within the 40-acre claim block by heavy equipment. In reclaimed areas, seeded grasses and forbs would become established within two to three growing seasons. Shrubs would become established in two to four years and reach full size within 10-20 years. Trees would be established primarily by natural processes and would take several decades to reach pre-disturbance size and diversity.

Disturbed areas would be most susceptible to the establishment and spread of noxious weeds such as Canada thistle, oxeye daisy, rush skeletonweed, spotted knapweed, and yellow toadflax until seeded species become established. Sparks from mining equipment could start fires which would reduce or eliminate vegetation over the short term (two to three years) and shrubs and trees over the intermediate (two to four years) and long term (ten to twenty years).

### **3.2.2.2 Alternative B - Proposed Action**

Impacts to vegetation resources would generally be as described in Alternative A for disturbed areas within the claim block. Monitoring for noxious weed species by Mr. Nelson would help ensure early treatment (using BLM-approved herbicides) and minimize the potential for weeds to become established and spread. Implementing safety precautions, such as spark arrestors, would reduce the potential for fires from mining activities.

## **3.3 Wildlife and Migratory Birds/Special Status Animals**

### **3.3.1 Affected Environment - Wildlife and Migratory Birds/Special Status Species**

The project area is situated in the Southern Forested Mountains Ecoregions as described by McGrath (2002). These southern forests support a diverse suite of wildlife species including elk, mule deer and other mammals, various raptor species, and many species of resident and migratory birds. Several migratory birds and BLM special status species associated with this ecoregion have the potential to occur in the vicinity of the project, including the western tanager, yellow-rumped warbler, northern goshawk (Type 3 - Regional/State Imperiled Species: species that are experiencing significant declines in population or habitat and are in danger of regional or local extinctions in Idaho in the foreseeable future if factors contributing to their decline continues), flammulated owl (Type 3 - Regional/State Imperiled Species), and white-headed woodpecker (Type 4 - Idaho Peripheral Species: species that are generally rare in Idaho with the majority of their breeding range largely outside the state).

In west-central Idaho, western tanagers select nest sites where forest canopy is more open (old road edges, meadow edges, and edges of openings). Yellow-rumped warblers are less common in secondary/early successional stages of coniferous forest, but choose nest sites on horizontal branches of moderate sized trees (~12" dbh). Goshawks use a wide variety of habitats for foraging, but prefer dense conifer stands with high canopy closure for nesting. Flammulated owls nest in cavities in moderate-sized (12-20" dbh) in areas with diverse, well vegetated understories and forage in a diversity of areas from grasslands to mixed conifer stands. White-headed woodpecker nest in large (20" dbh) snags and feeds primarily on ponderosa pine seeds.

### **3.3.2 Environmental Consequences - Wildlife and Migratory Birds/Special Status Animals**

#### **3.3.2.1 Alternative A - No Change/Continue Current Notice**

Because of the small scale and seasonal nature of Mr. Nelson's operations, there would be limited impacts to wildlife. Wildlife would experience low levels of disturbance from human activity and operation of motorized equipment, primarily during breeding through brood-rearing periods (April-July). Areas that are cleared of vegetation and subsequently re-vegetated would

benefit species that prefer edges and early successional habitat including the American crow, hermit thrush, and black-capped chickadee. Species that require un-fragmented habitat (e.g., olive-sided flycatcher, varied thrush, Townsend's warbler) could be adversely impacted by vegetation removal; however, because of the small size of the openings created in and the long-term recovery of vegetation, the impacts would be limited and occur from 0 to 20 years post disturbance.

Tree nesting species, especially those that require moderate to large sized trees, could be adversely affected by removal of trees greater than 12 inches dbh. Foraging areas for goshawk, flammulated owl, and white-headed woodpecker would be minimally affected because cleared areas would represent a small portion of typical home ranges (e.g., 6,400 acres for a male goshawk; 30-40 acres for flammulated owl).

### **3.3.2.2 Alternative B - Proposed Action**

Impacts to wildlife and their habitats would generally be as described in Alternative A for activities within the claim block, including the installation of a new power pole. The requirement to notify BLM prior to removing trees greater than 12 inches dbh should ensure that active nest trees would not be disturbed which would benefit goshawk, flammulated owl, and white-headed woodpecker. Prior to installation of the new power pole, BLM would be notified and coordination between the affiliated power companies would take place to ensure protection to migratory birds and safe-guard habitat from wildfire risk.

## **3.4 Water Quality/Riparian/Special Status Fish**

### **3.4.1 Affected Environment - Water Quality/Riparian/Fish**

Grimes Creek is located just west of Grimes Creek Road. Placer operations are located on the east side of Grimes Creek Road. Approximately 640-feet of his claim block is adjacent to the road, and the balance of the claim block boundary ranges from 150 to 310 feet east of the Grimes Creek Road (Map 2). The operation is not located in or near the riparian areas of Grimes Creek.

All soils in the original valley floor in which Grimes Creek flowed were grossly altered and destroyed during historic dredge mining activities, and virtually no remnants of the original pristine soil profile remain. However, monitoring of vegetation in riparian areas along Grimes Creek, and on adjacent upland sites in the last 12-years, has indicated that plant communities are in a steady upward trend. Shallow layers of organic materials are decaying, forming young organic soil which can now support seedlings of willows, conifers, and graminoides. The soil-forming process has taken well over 100-years to develop. Examination of conifer age classes in the affected area (both upland and riparian areas) suggest that beginning 10-15-years ago, woody vegetation has increased three-fold or more, improving the hydrologic functioning condition and connection to upland and riparian habitats along Grimes Creek. However, within the active streambed of Grimes Creek, streambanks continue to migrate laterally, and are subject to headcut formation due to the historic loss of vegetation, and alteration of the natural stream dimension, pattern, and profile. It would be many more decades before the stream reaches hydraulic equilibrium. Development of stable channel morphology is dependent on establishment of a robust, deep-rooted plant community, to stabilize the coarse, unconsolidated, and extremely unstable granitic streambank substrates.

Grimes Creek is listed on the Idaho Department of Environmental Quality (IDEQ) 303(d) list of water quality impaired streams, citing sedimentation and siltation as the primary pollutant (US EPA, 2010).

Grimes Creek supports a viable population of redband trout (*Oncorhynchus mykiss gairdneri*), a Type 2 – Range-wide/Globally Imperiled Species: species that are experiencing significant declines throughout their range with a high likelihood of being listed in the foreseeable future due to their rarity and/or significant endangerment factors (IDFG, 2005). Redband trout are a native subspecies of rainbow trout. There are no U. S. Fish and Wildlife Service listed *Candidate, Threatened, or Endangered* fish or aquatic species, or designated *Critical Habitat*, in the Grimes Creek watershed, including bull trout (*Salvelinus confluentus*).

### **3.4.2 Environmental Consequences - Water Quality/Riparian/Fisheries**

#### **3.4.2.1 Alternative A - No Change/Continue Current Notice**

This small placer mining operation would have no effect on riparian areas along Grimes Creek, as no surface disturbance would occur in riparian areas. Water quality would remain unaffected under ordinary circumstances; however, it is possible that overland flows resulting from very heavy precipitation events could cause local flooding of the disturbed mine site, and result in elevated sediment beyond natural background levels. However, if an event of that magnitude were to occur in the watershed, sediment contributed from Mr. Nelson's small operation would be unnoticeable when contrasted with sediment yielded from the greater watershed. It is highly unlikely that sediment associated with normal mine operations would ever result in a violation of IDEQ water quality standards. Daily operations pose no threat to water quality, and post-mining reclamation efforts would help stabilize soils and reduce sediment yielded from the site once ground cover is re-established (two to three growing seasons).

Mr. Nelson uses a 6hp, two-inch-diameter gas-powered pump, to draw water from Grimes Creek for his wash plant operations. In order to prevent petroleum spills associated with pump operations, an impermeable geotextile-lined berm would be placed around and under the pump to prevent accidental fuel or oil spills from polluting ground or surface waters.

No direct disturbance occurs in or near the active stream channel, or in adjacent riparian areas of Grimes Creek other than placement of the 2-inch suction hose supplying the wash plant. The suction hose end is equipped with a screen to pre-filter the water, and prevent entrainment of fry and juvenile redband trout. Adequate measures are in-place to prevent sediment or petroleum spills from threatening water quality or aquatic habitat. Mr. Nelson's current and proposed plan of operation would have no negative effect on redband trout populations in Grimes Creek.

#### **3.4.2.2 Alternative B - Proposed Action**

Impacts to water quality and fisheries would be as described in Alternative A for all activities within the claim block. Should it occur, installation of a power pole on the east side of the road would only disturb a small area (~40-square-feet), which would be re-seeded following pole

installation. Power pole installation would have no adverse effect on riparian areas, water quality, or fish.

## **3.5 Air Quality**

### **3.5.1 Affected Environment - Air Quality**

The area's air quality is considered good to excellent, with no known air concerns. However, fugitive dust is created as vehicles travel the county roads providing access to Pioneerville and other Boise Basin areas. This dust settles quickly, or is dispersed by the prevailing winds.

### **3.5.2 Environmental Consequences - Air Quality**

#### **3.5.2.1 Alternative A - No Change/Continue Current Notice**

Because of the small scale of Mr. Nelson's operations, there would be little impact to air quality. Fugitive dust could be created as pits are being dug with the backhoe, material loaded in and out of his dump truck, hauled to the processing area, and dumped into the wash plant hopper. No dust would be created by the gold processing as the water used to wash away oversized material eliminates dust. Some dust would also be created when pits or trenches are backfilled to ready for reclamation.

#### **3.5.2.2 Alternative B - Proposed Action**

Impacts to air quality would generally be as described in Alternative A for activities within the claim block. Spraying water on haul roads and mining sites would help reduce fugitive dust.

## **3.6 Visual Resource Management**

### **3.6.1 Affected Environment - Visual Resource Management**

The area of Mr. Nelson's mining site is classified as a VRM Class III management area. The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape. Although historic dredge mining and sluicing in the area has destroyed the pristine soil layer, a very young, thin layer of soil has developed over the past 100+ years, promoting some growth of grasses, forbs, and woody vegetation including shrubs, conifers, and willows. The area still retains an unnatural state with dirt roads, piles of mined materials, and uneven, rocky topography with some areas of little or no vegetation.

### **3.6.2 Environmental Consequences - Visual Resource Management**

#### **3.6.2.1 Alternative A - No Change/Continue Current Notice**

Conditions would remain as they currently are, with alternately forested and barren dirt outcrops and mounds of placer-mined materials existing throughout the area. The mining activities would be noticeable, but because of their small size (one acre affected per year) and consistent reclamation efforts over the long term, the disturbed areas would not result in noticeable changes in form, line, contrast, or texture with historic mining activities.

### **3.6.2.2 Alternative B - Proposed Action**

Impacts to visual resources would generally be as described in Alternative A for activities within the claim block.

## **3.7 Recreation**

### **3.7.1 Affected Environment - Recreation**

Much of the Boise Basin area experiences high levels of recreational use. Activities include dispersed camping and picnicking, recreational gold panning, late spring and summer OHV riding, fall hunting, and winter over-snow activities. Off-highway vehicle travel is limited to existing or designated roads and trails.

### **3.7.2 Environmental Consequences - Recreation**

#### **3.7.2.1 Alternative A - No Change/Continue Current Notice**

Conditions would remain as they are at present. Mr. Nelson's operations would be conducted near a well-traveled county road and would not inhibit any recreational uses of the area. Unmarked excavations could be a safety hazard for OHV users that are riding cross-country instead of on existing roads and trails.

#### **3.7.2.2 Alternative B - Proposed Action**

Impacts to recreation would generally be as described in Alternative A for activities within the claim block. Placement of berms or signs around larger excavations open for more than one mining season would improve safety for OHV users.

## **3.8 Cultural Resources**

### **3.8.1 Affected Environment - Cultural Resources**

Placer mining activities in the Boise Basin began in the early 1860s. In the publication, *GOLD CAMPS & SILVER CITIES*, Merle W. Wells noted that Pioneerville was also known as Pioneer City and Hogem. He also noted that in 1863, Pioneerville had 2,743 residents.

The cultural resource database revealed that since 1983, seven surveys had been conducted within the boundaries of Section 3 where Pioneerville is located. Those surveys recorded 13 cultural resource sites. Most of those sites were historic scatters relating to mining activities, and most had not been properly evaluated for their listing or potential to be listed on the National Register of Historic Places (NRHP).

For consideration of cultural resources, this EA has been limited to Nelson's two mining claims. When these claims are analyzed, it reduced the number of previous surveys to four, and the number of previously recorded cultural resource sites to two sites. In 2014, one of those sites, a historic house-foundation that dated to about 1960 was located and updated. The second recorded site was a historic mining site that contained artifacts relating to a historic occupation by Chinese miners, but the site could not be relocated in 2014. One new site was recorded as a series of mining ditches that were recorded as a GIS layer in 2014. The house foundation and the mining ditches were evaluated as cultural resources that did not meet the definition of a

historic property. These evaluations indicated that the foundation and the mining ditches were not eligible to be listed on the National Register of Historic Places (NRHP), and the sites would not require protection or mitigation measures. Because of their locations on the landscape, it is likely that the proposed mining activities would not impact the sites because they probably do not have gold bearing deposits located near the two sites.

### **3.8.2 Environmental Consequences - Cultural Resources**

#### **3.8.2.1 Alternative A - No Change/Continue Current Notice**

There is the potential that cultural resources could be unearthed in the mining activities and reclamation work authorized under the existing Mining Notice. Mining activities and reclamation work could damage or destroy these resources and their associated context, but standard and special stipulations imposed on the miner would protect any artifacts or features that would be eligible for listing on the NRHP (Standard Stipulations 2 & 3).

#### **3.8.2.2 Alternative B - Proposed Action**

The environmental consequences to cultural resources would be the same described in Alternative A.

### **3.9 Social and Economic**

#### **3.9.1 Affected Environment - Social and Economic**

Both year-round and summer residents live in the communities of Centerville, Placerville, Pioneerville, and Quartzburg. The only town with a well-established residential and commercial population is Idaho City, the County seat of Boise County, which is located 9.6 miles south of Pioneerville.

Since 2000, Idaho City has had a population increase of 10.7 percent, with 1,124 people living there in 2007. The 2000 census report shows that it is seven-tenths of a square mile, had 257 housing “units,” median household income was \$28,000, and 17% were below poverty level.

Idaho City's cost of living was 7.48% lower than the U.S. average. Its public schools spent \$4,670 per student; the national average was \$6,058. There were 15.4 students per teacher in Idaho City. The unemployment rate was 3.2 percent; the U.S. average was 4.6%.

<http://censtats.census.gov/data/ID/1601639610.pdf>

### **3.9.2 Environmental Consequences - Social and Economic**

#### **3.9.2.1 Alternative A - No Change/Continue Current Notice**

Mr. Nelson’s mining operations are typical of the recreational and small-scale placer mining occurring in the Boise Basin. They are seasonal and would have little effect on the area’s social or economic conditions. Like other miners, he mines by himself, lives during the summer in a sheepherder’s tent and cargo trailer on his unpatented mining claims, and repairs his own equipment. He does purchase fuel and supplies in Idaho City.

### **3.9.2.2 Alternative B - Proposed Action**

The effects of Mr. Nelson's mining operations would be the same as Alternative A.

## **3.10 Cumulative Impacts**

### **3.10.1 Environmental Consequences - Cumulative Impacts**

The cumulative effects analysis area for this proposal is limited to Section 3 of T. 7 N., R. 5 E., Boise Meridian on the To Close (IMC-202893) and To Close #2 (IMC-205745) placer claims. The effects would not extend outside the area because the proposed mining activity would be conducted at such a small scale that none of the effects described above extend beyond the immediate area described

Past activities on this site include dredge and hydraulic placer mining that began in the 1860s on most of the land along Grimes Creek and its tributaries. This site has recovered from past mining activities and the proposed project would have negligible effects to the defined cumulative effects analysis area. Additionally, there are no other present or reasonably foreseeable future projects proposed in the cumulative effects analysis area; therefore, by definition, there are no cumulative actions or impacts. There is no need to analyze effects beyond those directly and indirectly associated with the proposed action and alternatives.

## **4.0 Consultation and Coordination**

### **4.1 Four Rivers Field Office Interdisciplinary Team Members**

The following staff reviewed and provided input for this EA:

Dean Shaw, Cultural and Archaeological Resource Specialist  
Valerie Lenhartzen, Geologist  
Joseph Weldon, Wildlife Biologist  
Lara Hannon, Acting NEPA Specialist  
J. Allen Tarter, Natural Resources Specialist  
Matt McCoy, Assistant Field Manager  
Mark Steiger, Botanist  
Lonnie Huter, Noxious Weeds Specialist  
Larry Ridenour, Recreation Specialist  
Tate Fischer, Field Manager

### **4.2 List of Agencies, Organizations, and Individuals Consulted**

Sharm Nelson, Mining Claimant  
Shoshone-Paiute Tribes  
John Robison, Idaho Conservation League

### **4.3 Public Participation**

The public was notified in 2012 when the BLM listed the project on the ePlanning NEPA Register webpage ([https://www.blm.gov/epl-font-office/eplanning/nepa/nepa\\_register.do](https://www.blm.gov/epl-font-office/eplanning/nepa/nepa_register.do)). No comments were received from this posting.



## 5.0 References

Idaho Department of Fish and Game. 2005. Inland Redband Trout. 3 pp.

McGrath C.L., Woods A.J., Omernik, J.M., Bryce, S.A., Edmondson, M., Nesser, J.A., Shelden, J., Crawford, R.C., Comstock, J.A., and Plocher, M.D., 2002, Ecoregions of Idaho (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,350,000).

US Census Bureau. <http://censtats.census.gov/data/ID/1601639610.pdf>.

USDI (US Department of the Interior). 1988. Cascade Resource Management Plan Record of Decision. USDI, Bureau of Land Management. Boise, ID. 25 pp.

US Environmental Protection Agency. 2010. Letter to Water Quality Division, Idaho Department of Environmental Quality. Boise, ID. 2 pp.

Wells, M.W., 1983, Gold Camps & Silver Cities: Nineteenth Century Mining in Central and Southern Idaho: Idaho Department of Lands, Bureau of Mines and Geology, Bulletin 22, p. 3.

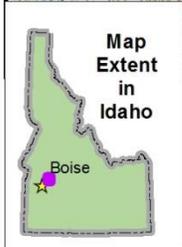
## **6.0 Maps**

Map 1. General Location Map

Map 2. Nelson Claim Block Map



**Map 1. General Location Map of the Boise Basin and Sharm Nelson's Plan of Operations at Pioneerville, T. 7 N., R. 5 E., Section 3, Boise Meridian, IDI-37327**



R:\loc\planning\NEPA\FRFO\Working\_EAs\Minerals\  
 DOI-BLM-ID-B010-2013-0021-EA\_SharmNelsonMPO-IDI37327\Maps, 2/19/2014 V. Lenhartzen

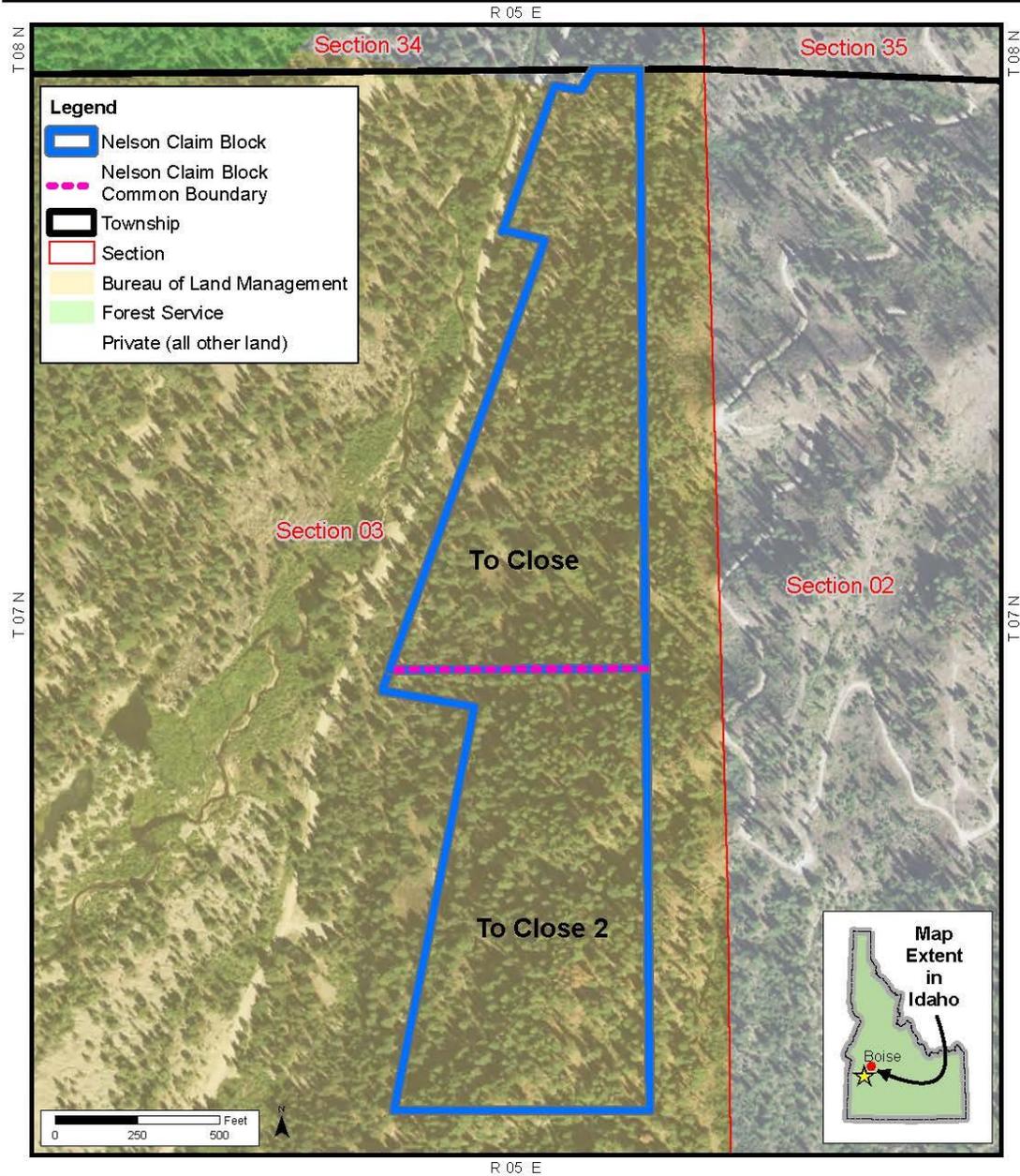


U.S. Department of the Interior  
 Bureau of Land Management, Idaho  
 Boise District



No warranty is made by the Bureau of Land Management. The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed. This map, if digital, cannot be made Section 508 compliant. For help with its data or information, please contact the BLM Idaho State Office webmaster at (208) 373-4000.

## Map 2. Nelson Mining Plan of Operations Claim Block





U.S. Department of the Interior  
Bureau of Land Management, Idaho  
Boise District, Four Rivers Field Office  
Map date: September 30, 2014



No warranty is made by the Bureau of Land Management. The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed. This map cannot be made Section 508 compliant. For help with its data or information, please contact the BLM Idaho State Office webmaster at (208) 373-4000.

R:\gis\Projects\_GISUser\FourRivers\FOMinerals\W Nelson\_Pioneer\Map2014\0930\_Map2\_NelsonMiningPlanOfOperations.mxd

## 7.0 Appendix A - Idaho Conservation League Comments and BLM Responses

### Access

- **Is there existing road access to the site or will road construction or re-construction be required?**
  - The existing access to the site is dirt/gravel tracks off the county road.
- **How will public access be managed during road construction, project implementation, and road re-construction?**
  - If any new access to other areas of the claim needs to be constructed, the construction would not impact public access. However, Mr. Nelson could be required to post signs to warn the public of any dangers. Public access would not be restricted to the site unless the public needs to be protected from hazards or the public poses a threat to his mine, equipment, or discovery.

### Noxious Weeds

- **Recommend that all heavy equipment be minimized to smallest reasonable type to mitigate soil compaction and noxious weed spread.**
  - This is not an issue. The proposed equipment is in scale for the type of activity proposed.
- **Recommend that BLM allow only the minimal vehicle that provides maximum containment for transportation of fuel and other equipment.**
  - Not an issue. Nelson uses his pickup truck to haul any equipment or fuel.
- **Recommend that access be provided once for reaching site and once when leaving the site following reclamation.**
  - Existing access would be maintained for public use and new access would be reclaimed upon project completion.
- **Recommend that all vehicles be thoroughly washed with a pressurized hose to remove noxious weed seeds before entering and leaving BLM-managed lands.**
  - It is possible to prevent bringing noxious weed seeds onto BLM-managed lands by requiring pressurized spraying of equipment before entering the operation site, but it is impractical to pressure wash equipment prior to leaving BLM-managed lands. Per Stipulation 23 a, the claimant/operator would be required to ensure vehicles and equipment are free of soil and plant material before entering the site.

- **Recommend re-seeding soil and waste rock piles with native plants; treatment of noxious weeds; and a three-year post-closure period for monitoring weeds and successful re-vegetation.**
  - These requirements are addressed in the Stipulations and Standard Operating Procedures (stipulations 23 b and e).

### **Water Quality Protection**

- **Mining-related activities have a well-documented history of adversely impacting water quality and fish populations. Weed-free straw bales or silt-fences should line any drainage to protect streams from sedimentation and be removed upon completion of operations.**
  - Because the claimant/operator is recovering placer material, no chemicals would be used or released. No heavy metals or sulfides would be released because no rock crushing would occur. The washed material would drain into a settling pond that does not have a surface water connection to Grimes Creek.
- **The effects of mining activities on surface water and groundwater quantity and quality need to be determined. The BLM should ensure that the material exposed from trenching does not have the potential for acid-mine drainage or other forms of contamination. Low-impact sampling to determine the possible effects needs to be incorporated as part of this analysis, as it may determine project implementation and reclamation. We are also interested in any preexisting water quality baseline conditions, preexisting water quality issues from previous mining activities and the depth and flow of the water table. The BLM needs to describe how surface and groundwater may interact with 15' deep trenches.**
  - There is no pyrite mineralization in the placer deposits that Mr. Nelson is mining, therefore no acid mine drainage or other form of contamination.

### **Trench Location and Design**

- **We recommend that only one trench be open at any one time. It is unclear in the description how many trenches will be excavated. The duration of the permit is also unclear. We recommend limiting the Plan of Operations to three years and then reassessing the project. Constructing a 40' wide, 15' depth by 150 long appears challenging from an engineering and soil stability standpoint. The BLM should ensure that this type of trench is feasible given the soil characteristics and geology. We are concerned that the actual trench footprint may be much larger.**
  - The mining plan of operations has no federally-mandated term length, but is more dependent on the life of the mine (in this case, the length of time it takes to

recover any valuable minerals on the claims). The BLM is required to conduct compliance inspections at least twice annually and evaluate mining plans of operations for adequacy of the reclamation bond every three years. Any issues identified by the BLM must be addressed by Mr. Nelson. There is no limit on the number of trenches that can be excavated over the life of this mining plan; however, Mr. Nelson will be required to conduct interim reclamation as practicable every fall. During the past three and one half years, the BLM has not identified any issues on similarly-sized hill slopes and trenches that Mr. Nelson has been excavating under his existing mining notice.

- **Trenches and any overburden, topsoil and coarse woody debris stockpiles need to be located to minimize vegetation disturbance and, in particular, the cutting of any large diameter trees. The BLM should disclose the number and size of trees needing removal. All vegetation should remain on site and no salvaging should be allowed as this material is important for site reclamation.**
  - The amount of topsoil in this area is very limited, but it and any vegetative material cleared from an excavation site would be set aside for reclamation. Mr. Nelson is to notify the BLM prior to cutting any trees bigger than 12 inches in diameter at breast height (dbh) so that the trees can be surveyed for nesting birds. Felled trees >12" dbh would be retained on site and used for reclamation purposes (Stipulation 11). Mr. Nelson would not be authorized to commercially log the area. Tree removal could occur during excavation and/or road construction. Mr. Nelson would be required to have a wood permit to utilize any fallen trees. The BLM has not conducted a stand inventory.
- **We are concerned about wildlife, including ungulates but also amphibians and invertebrates, becoming trapped in trenches. The BLM should require wildlife-fencing as well as silt fences around the trenches to deter small animals from falling in. Multiple ramps should be required to be placed at an appropriate angle in the bottom of the trench any time the site is unoccupied.**
  - The excavations (trenches) would be gently sloped on one side to allow equipment access; therefore, wildlife would be able to escape.
- **The trench should be constructed in such a way that a minimal amount of ground is disturbed at any one time and that the new material that is exposed and not needed for sampling is used to backfill the recently excavated portion of the trench. In this way, the site footprint can be significantly reduced. Trenches should also be oriented to minimize interference with groundwater flows.**
  - Mr. Nelson has operated in a manner that minimizes disturbance, limits site footprint, and minimizes interference with ground water for the last three and one half years. He would continue to operate in this manner.

## **Hazardous materials**

- **On-site fuel quantities should be disclosed in the NEPA process and limited to the extent practical. Refueling stations need to be carefully located. Appropriate sized spill kits should be on site for refueling and cached at any stream crossings. In addition, substance-specific spill kits should be available in all operating areas and be inspected regularly. These kits should include fuel containment equipment, including chemical absorbers and booms as needed.**
  - The stipulations would require spill kits and a spill contingency plan for any hazardous materials used.
- **All motorized equipment should have working mufflers and spark arrestors and electrical equipment should be properly insulated. Fire extinguishers should be inspected regularly throughout the project period and located in all vehicles. Handheld implements (shovels or axes) should be accessible at all operating locations. Hazardous wastes including grease, lubricants, oil, and fuels need to be disposed of off-site in an environmentally appropriate manner on a weekly basis.**
  - Stipulation 17 addresses fire hazards and mitigation. Special Stipulation 9 addresses hazardous waste disposal.

## **Fires and emergency egress**

- **The BLM and operator should have an emergency egress plan in place in the event of a wildfire and have access to emergency communications.**
  - Mr. Nelson would be required to report any on-site fires to the BLM (Stipulation 17). The site is immediately adjacent to Grimes Creek Road which would provide adequate emergency egress.

## **Trench water**

- **The BLM needs to describe how any water encountered or trapped in the trenches will be managed, assessed, and discharged. We are also concerned about the trench intercepting groundwater and interfering with groundwater flows to downstream seeps and springs. We are also concerned that the refilled waste rock may release toxins to groundwater flows. A hazardous materials management plan needs to be developed in the event that mercury is discovered. A study of these potential effects and mitigation needs to be completed in advance of the issuance of a decision. Because of the potential impacts to groundwater, the BLM should analyze this project with an Environmental Assessment. Factors to consider include effects to any springs and seeps in the project area.**

- Mercury may be encountered when mining or disturbing old dredge tails. Mr. Nelson does not intend to mine the old dredge tails and the ground that he is disturbing and the material that he is washing to recover gold does not contain pyrite mineralization, therefore no acid mine drainage or other form of contamination could impact groundwater. Mr. Nelson has operated in a manner that minimizes disturbance, limits site footprint, and minimizes interference with ground water for the last three and one half years.

### **Water source**

- **The BLM should describe any on or offsite water needs, the source of water and approximate volume to be used on a daily basis. A water right needs to be obtained by the operator. Water use should emphasize efficient use of water and be designed to avoid, minimize and mitigate for water withdrawals. We are particularly concerned about impacts to Grimes Creek from water withdrawal during low water periods in the summer.**
  - Mr. Nelson is required to annually apply to the Department of Water Resources for a temporary water permit to draw water out of Grimes Creek to operate his wash plant (See Special Stipulation 2).

### **Living situation**

- **It is unclear if site occupancy is warranted. If site occupancy is warranted and allowed, the operator should limit the use of generators to normal campground hours and be sure that lights are directed downward to be consistent with Dark Sky principles. No trash burning should be allowed. The operator should be required to use regularly-serviced portapotty-style sanitation services.**
  - Mr. Nelson does not intend to operate at night or burn trash onsite. In the past, Mr. Nelson has and in the future would provide approved sanitary facilities at his camp site, and maintain a clean and orderly camp.

### **Excavation operations**

- **We are concerned about disturbance to wildlife and recreationists from excavation operations. The BLM needs to describe the hours and duration of excavation operations. If used at night, drill rigs should have sound-dampening baffles to reduce the volume of noise. For night use, lights should be directed downward to be consistent with Dark Sky principles.**
  - Excavation and processing would take place only during daylight hours; therefore there is no need for operating lights. Operations could occur Monday through

Sunday, mid-April through mid- to late-October. There would be no drilling rigs used in this mining operation.

### **Length of operations**

- **The BLM needs to describe the approximate months of use for this project for 2014. Should the project not be completed and reclaimed as projected, the BLM needs to provide specific instructions about how to stabilize the site for winter operations. These measures should include removing all hazardous materials, reseeding and stabilizing any loose soils, and placing wattles and straw bales at strategic locations.**
  - Months of operation for this project would be April through mid-November annually, depending on weather. Stabilization of the site for winter has not yet been a subject of discussion but it may be necessary given the increased amount of trenching and possibility for erosion and runoff.

### **Stormwater permit**

- **The operator will need to obtain a stormwater discharge permit to reduce erosion from the disturbed area.**
  - Grimes creek is located across the county road from Mr. Nelson's mining and processing activity. Not sure if EPA would require a NPDES permit or not but 43 CFR 3809.420 states that he shall abide by any other state, local or federal laws.

### **Historic aspects**

- **The BLM should coordinate with the State Historic Preservation Office to ensure that historic features in the project area are not disturbed. The BLM should include special instructions in the event artifacts are found.**
  - This is covered in Standard Stipulations 2 and 3.

### **Transportation Plan and Site Access**

- **The BLM needs to describe the primary and secondary transportation routes used to access the site, the types of vehicles used to transport equipment, the number of trips per week, the volume of hazardous materials hauled, and the details of a Spill Prevention Plan. The BLM should consider requiring the operator to inform the County and members of the public about the timing for transporting equipment.** This is a relatively small placer mining operation. It is unlikely that additional equipment would need to be transported to or from the mining site. The only potential hazardous material that would be hauled is diesel fuel which is transported in the back of Nelson's pickup.

## Cumulative impacts

- **The BLM must also analyze and disclose the direct and indirect cumulative effects of this project in conjunction with all past, present and reasonably foreseeable future actions, including additional mineral exploration projects in the area, reclamation and restoration requirements, noxious weed management, travel management and wildlife & fisheries protections.**
  - Cumulative impacts are covered in the EA.

## Reclamation

- **The BLM needs to be very clear about what standards will be used for once again reclaiming the site. All topsoil or large woody debris should be salvaged, stabilized, and replaced following operations. We recommend full ripping, recontouring, reseeding, and placing similar amounts of coarse woody debris for that area and using rocks or log structures prevent illegal motorized access. Reclamation of one trench should be complete before clearing and construction begins on a new trench. This includes refilling all trenches, recontouring and revegetating the site, removing noxious weeds, and naturalizing the area. Complete reclamation should occur as soon as possible after operations cease. The BLM should take photo-plots of the trenching areas before trenching and use those as a reference to determine if reclamation was complete before a bond is released.**
  - Reclamation is covered by Standard and Special Stipulations. The BLM would not be recording before and after photo-plots of trenching areas.

## Financial Assurance

- **The BLM should require a financial assurance that ensures reclamation would be completed in the event of abandonment of the site. The reclamation bond must be independent of the bond covering any other mining operations. Bonding should also be provided for possible spills of fuels and other hazardous materials along the transportation route. The bonding should reflect the impacts to the sensitive nature of this site and the listed species inhabiting the area. Bonding costs should be calculated according to BLM pricing, including the cost of renting and transporting equipment and wages for all workers and supervisors. These bonding calculations should be included in an environmental review and available for public comment and review.**
  - Bond reviews are required every two years on Notices and every three years on Mining Plans, using industry standards and Davis-Bacon wages. It is not a CEQ or 43 CFR 3800 requirement that environmental reviews be prepared for reclamation cost estimates.